

Advanced, universal, and facile gel spinning-based aerogel fibrillation : in situ fabrication of highly stretchable TPU-silica hybrid network in ambient conditions

Omranpour, Hosseinali; Hassanifard, Soran; Monfared, Ali Reza; **Omranpour Shahreza, Babak**; Salehi, Amirmehdi; Jalali, Amirjalal; Kheradmandkeymoussi, Mohamad; Rahman, Saadman Sakib; Behdinin, Kamran; Park, Chul B. Advanced composites and hybrid materials 2024 / art. 105 <https://doi.org/10.1007/s42114-024-00911-9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Analysis of the reciprocal wear testing of Aluminum AA1050 processed by a novel mechanical nanostructuring technique

Omranpour Shahreza, Babak; Kommel, Lembit; Sergejev, Fjodor; Ivanisenko, Yulia; Antonov, Maksim IOP conference series : materials science and engineering 2021 / art. 012051, 6 p. : ill <https://doi.org/10.1088/1757-899X/1140/1/012051>

Bio-templated aerogel fibers: heterogeneous spinodal architecting and in situ fibrillation of thermoplastic polyurethane-silica on nanostructured cellulose nanofiber scaffold for enhanced thermomechanical performance

Omranpour, Hosseinali; Monfared, Ali Reza; Buahom, Piyapong; **Omranpour Shahreza, Babak**; Salehi, Amirmehdi; Rahmati, Reza; Park, Chul B. ACS applied materials and interfaces 2024 / p. 57981-57994 : ill <https://doi.org/10.1021/acsami.4c14503> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of hard cyclic viscoplastic deformation on the microstructure, mechanical properties, and electrical conductivity of Cu-Cr alloy

Kommel, Lembit; Huot, Jacques; Omranpour Shahreza, Babak Journal of Materials Engineering and Performance 2022 / p. 9690-9702 <https://doi.org/10.1007/s11665-022-06997-w> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhancement of hydrogen storage in metals by using a new technique in Severe Plastic Deformations

Omranpour Shahreza, Babak; Kommel, Lembit; Sanchez, E. Garcia Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 173-178 : ill <https://doi.org/10.4028/www.scientific.net/KEM.799.173> <https://www.scientific.net/KEM.799.173> https://www.eester.ee/record=b5235278*est [Conference proceeding at Scopus](#) [Article at Scopus](#)

Evolution of microstructure and hardness in aluminum processed by high pressure torsion extrusion

Omranpour Shahreza, Babak; Ivanisenko, Yulia; Kulagin, Roman; **Kommel, Lembit**; Sanchez, E. Garcia; Nugmanov, Dayan; Scherer, Torsten; Heczal, Anita; Gubicza, Jenő Materials Science and Engineering : A 2019 / art. 138074, 10 p. : ill <https://doi.org/10.1016/j.msea.2019.138074> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental and numerical analysis of HPTE on mechanical properties of materials and strain distribution

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Gradient microstructure in tantalum formed under the wear track during dry sliding friction

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The impact of microstructural refinement on the tribological behavior of niobium processed by Indirect Extrusion Angular Pressing

Omranpour Shahreza, Babak; Hernandez-Rodriguez, Marco A. L.; Hernandez-Rodriguez, Edgar; **Kommel, Lembit; Sergejev, Fjodor** Tribology international 2022 / art. 107412 <https://doi.org/10.1016/j.triboint.2021.107412> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Microstructure and physical-mechanical properties evolution of pure tantalum processed with hard cyclic viscoplastic deformation

Kommel, Lembit; Omranpour Shahreza, Babak; Mikli, Valdek International journal of refractory metals and hard materials 2019 / art. 104983, 10 p. : ill <https://doi.org/10.1016/j.jrmhm.2019.104983> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Nanostructure development in refractory metals : ECAP processing of Niobium and Tantalum using indirect-extrusion technique

Omranpour Shahreza, Babak; Kommel, Lembit; Mikli, Valdek; Garcia, Edgar; Huot, Jacques International journal of refractory metals and hard materials 2019 / p. 1-9 : ill <https://doi.org/10.1016/j.jrmhm.2018.10.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A novel approach in mechanical nanostructuring synthesis of metal hydride : hydrogen sorption enhancement by High Pressure Torsion Extrusion

Omranpour Shahreza, Babak; Ivanisenko, Julia; **Sergejev, Fjodor**; Omranpour, Hosseinali; Huot, Jacques International Journal of Hydrogen Energy 2024 / p. 133-142 <https://doi.org/10.1016/j.ijhydene.2023.10.343> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A promising approach to solid-state hydrogen storage : mechanical nanostructuring synthesis of magnesium by high pressure torsion extrusion

Omranpour Shahreza, Babak; Sergejev, Fjodor; Ivanisenko, Julia; Huot, Jacques Advances in science and technology (volume 134). Materials Engineering and Modern Manufacturing, MeMM 2023 : Selected peer-reviewed extended articles based on abstracts presented at the 30th International Baltic Conference "Materials Engineering and Modern Manufacturing 2023", MeMM 2023. Materials science forum 2023 / p. 43-51 <https://doi.org/10.4028/p-4ccBoQ>

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Structuration of refractory metals tantalum and niobium using modified equal channel angular pressing technique

Omranpour Shahreza, Babak Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 103-108 : ill <https://www.scientific.net/KEM.799.103> https://www.ester.ee/record=b5235278*est <https://doi.org/10.4028/www.scientific.net/KEM.799.103> Conference proceeding at Scopus Article at Scopus

Synthesis and characterization of mechanical properties of boron–carbon-based superhard composites

Kommel, Lembit; Omranpour Shahreza, Babak Carbon Letters 2023 / p. 1311-1319 <https://doi.org/10.1007/s42823-022-00351-9> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Tailoring the microstructure and tribological properties in commercially pure aluminium processed by High Pressure Torsion Extrusion

Omranpour Shahreza, Babak; Kommel, Lembit; Sergejev, Fjodor; Ivanisenko, Yulia; Antonov, Maksim Proceedings of the Estonian Academy of Sciences 2021 / p. 540-548 : ill <https://doi.org/10.3176/proc.2021.4.23> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The effect of microstructure evolution on the wear behavior of tantalum processed by Indirect Extrusion Angular Pressing

Omranpour Shahreza, Babak; Huot, Jacques; **Antonov, Maksim; Kommel, Lembit; Sergejev, Fjodor;** Perez Trujillo, Francisco Javier; Heczal, Anita; Gubicza, Jeno International journal of refractory metals and hard materials 2023 / art. 106079, 11 p. : ill <https://doi.org/10.1016/j.ijrmhm.2022.106079> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS